

Observations of Comet b 1894 (Gale) made at the Royal Observatory, Greenwich.

(Communicated by the Astronomer Royal.)

The observations were made with the East, or Sheepshanks, equatorial, aperture 6·7 inches, by taking transits over two cross-wires at right angles to each other, and each inclined 45° to the parallel of declination. Magnifying power 55. On July 11 the observations were made with the 28-inch equatorial.

Greenwich Mean Solar Time.		Observer.	♂—*R.A.		♂—*N.P.D.	Corr. for Refraction.	Log factor of Parallax.	No. of Comps.	Apparent R.A.			Apparent N.P.D.			Comp. Star.
d	h m s		m s	s	' "	"			h m s	°	'	"			
1894. June	7 12 13 45	B.	+2 44'14	0'00	— 0 40'8	0'0	0'7171	3	11 19 41'43	49 13 50'3			a		
	21 10 59 4	"	— 0 0'45	0'00	— 1 8'6	0'0	0'6255	3	...	...	...		b		
	22 11 28 6	A.C.	+1 58'48	0'00	— 5 45'8	— 0'1	0'6735	2	...	...	...		b		
	22 11 28 6	"	+1 16'28	0'00	+ 7 20'4	+ 0'1	0'6735	2	...	...	...		c		
	24 11 8 27	H.	+1 24'80	0'00	+ 5 41'7	+ 0'1	0'6480	4	11 56 24'45	46 54 52'6			d		
	24 11 33 29	"	— 0 31'94	0'00	— 10 10'5	— 0'2	0'6866	4	...	...	...		e		
	28 11 19 3	"	+2 19'88	0'00	— 3 31'7	— 0'0	0'6521	6	12 4 4'27	46 41 19'9			f		
	28 11 19 3	"	+1 25'83	0'00	— 1 9'5	+ 0'0	0'6521	6	12 4 4'54	46 41 19'6			g		
	29 10 44 43	C.D.	— 0 38'00	0'00	+ 9 22'9	0'0	0'6233	3	12 5 59'12	46 38 41'7			h		
	29 10 51 23	H.F.	— 0 38'42	0'00	+ 9 36'1	+ 0'1	0'6344	3	12 5 58'70	46 38 55'0			h		
	30 11 20 25	A.C.	+1 15'66	0'00	+ 7 6'4	+ 0'1	0'6831	4	12 7 52'76	46 36 25'3			h		

Greenwich Mean Solar Time.	Observer.	*R.A.			Corr. for Refraction.	Log factor of Parallax.	*N.P.D.	Corr. for Refraction.	Log factor of Parallax.	No. of Comps.	Apparent R.A.			Apparent N.P.D.	Comp. Stat.
		d	h	m s							h	m	s		
1894 July		2	10	57 10							12	11	32.14	46° 32' 52.4"	i
	H.	3	11	25 23	0.00	9.7013	— 3 58.3	0.0	0.6533	6	12	13	25.12	46 31 3.7	i
	A.C.	7	10	46 3	0.00	9.7053	— 5 46.9	— 0.1	0.6990	3	12	20	34.44	46 27 0.0	k
	"	7	10	48 56	0.00	9.7019	+ 7 34.3	0.0	0.6514	1	12	20	39.78	46 27 12.3	l
	"	11	11	20 57	0.00	9.7026	— 6 10.9	— 0.1	0.6561	1	12	20	39.78	46 27 12.3	m
	M.	11	11	20 57	0.00	9.7051	+ 1 5.9	0.0	0.7163	7	...	...	...	...	n
	"	11	11	21 26	0.00	9.7051	+ 2 33.3	0.0	0.7169	6	...	...	...	...	o
	"	11	11	30 42	0.00	9.7040	+ 2 50.0	0.0	0.7291	1	...	...	...	...	p
	"	11	11	30 42	0.00	9.7040	+ 3 11.7	0.0	0.7291	1	...	...	...	...	

Notes.

The observations are corrected for refraction, but not for parallax. They are also corrected for the error of inclination of the wires, and for the motion of the comet.

June 21.—Very difficult and doubtful observations; sky very hazy; observations impaired also by glow from great fire in Finsbury.

June 22.—Comet faint; cloudy.

June 28.—Comet exceedingly faint.

July 3.—Comet very faint and ill-defined.

July 7.—The comet was excessively faint; observations rough. The observations of R.A. are very discordant, but no mistake has been detected.

July 11.—The comet was exceedingly diffused and faint; no shape could be detected, certainly no nucleus. Generally it could be seen only by partly averted vision.

The initials M., H., A.C., B., H.F., C.D., are those of Mr. Maunder, Mr. Hollis, Mr. Crommelin, Mr. Bryant, Mr. Furner and Mr. Davidson respectively.

Comparison Stars.			Authority.	
Star's Name.	R.A., 1894 <sup>o</sup> h m s	N.P.D., 1894 <sup>o</sup> ° ' "		
a. Groombridge, 1772	11 16 55.51	49 14 37.0	Greenwich Observations, 1887, -88, -90, with P.M. -0 <sup>h</sup> 0084 +0 <sup>h</sup> 025.	
b. B.D. +43°, 2167	11 50 29.1	47 8.2	Bonn Observations, vol. v.	
c. B.D. +43°, 2169	11 51 9.5	46 55.0	"	
d. B.D. +43°, 2174	11 54 57.86	46 49 16.3	"	
e. B.D. +43°, 2181	11 56 59.5	47 4.3	"	
f. W.B. (2) XI., 1183	12 1 42.63	46 44 56.9	Weisse's Bessel (2).	
g. B.D. +43°, 2191	12 2 36.94	46 42 34.3	Equatorial Comparisons with star <i>f</i> at Cincinnati ( <i>Ast. Journ.</i> 323)	
h. W.B. (2) XII., 95	12 6 35.34	46 29 24.0	Weisse's Bessel (2).	
i. W.B. (2) XII., 198	12 12 4.75	46 36 55.7	"	
k. W.B. (2) XII., 358	12 19 11.28	46 19 30.4	Pulkova Catalogue, 1875.	
l. W.B. (2) XII., 373	12 19 45.76	46 33 28.0	Lalande and Weisse's Bessel (2).	
m. B.D. +43°, 2236	12 27 2.8	46 25.0	Bonn Observations, vol. v.	
n. Anonymous	12 28 15	46 23	Difference from star <i>m</i> .	
o. "	12 26 27	46 23	"	
p. "	12 26 44	46 23	"	

Royal Observatory, Greenwich:  
1894 September 11.

*Observations of Comet b 1894 (Gale).**(Communicated by Sir R. S. Ball.)*

The Comet (Gale) was again observed here on the night of June 11. The place obtained from the observations is—

G.M.T. corrected for Aberrn.		Geoc. R.A.	Geoc. Decl.
1894.		h m s	° ' "
June 11	49 56 5	11 29 14 77	41 36 3 2
R.A. 1894.0.		Comparison Star.	No. of
		Decl. 1894.0.	Comparisons.
h m s		° ' "	
11 33 19 40		41 43 56 8	10
		W.B. 11 <sup>h</sup> 602	

From this observation, combined with those made here on May 4 and May 23, Mr. Graham obtained the following parabolic elements of the orbit:—

*Per. Pass. 1894 April 13 53750 Greenwich M.T.*

$$\left. \begin{array}{ll} \pi - \Omega & 324^{\circ} 19' 21''.92 \\ \Omega & 206^{\circ} 20' 55''.81 \\ i & 87^{\circ} 3' 11''.22 \end{array} \right\} 1894.0$$

$$\log q \quad 9.9928092$$

Motion direct.

The difference between the observed and calculated places on May 23 is—

	In R.A.	In Decl.
	s	' "
O - C	+ 0.12	- 1.1

*The Observatory, Cambridge:*  
1894 June 27.